

ABSTRACT OF THE DISCLOSURE

Anatomically contoured anterior cervical plates with bone ingrowth surfaces, providing for intersegmental compressive preloading, and a rigid and locked interface to all of the bone screws, with those engaging the vertebrae deployed in highly convergent pairs. The bone screws have a tapered self-tapping leading end, an increasing root diameter with a generally constant outer diameter with a thread that is narrow and sharp throughout and an enlarged head portion capable of an interference fit to the receiving holes of the plate. Instrumentation consists of plate holders, a compression apparatus and a pilot hole forming device that interlocks with the plate. Methods for spinal compression and bone hole preparation are provided.